

# THE GROWING IMPACT OF VENTURE CAPITAL ON MICHIGAN'S ECONOMY

Submitted by  
Maureen Miller Brasna



# 120

## Companies Started

There are more than 125 venture capital-backed and/or angel-backed companies located in Michigan.

\* Source: MVCA 2010 Annual Report; updated figures will be available April 2015

# 2,000

## Jobs Created

More than 2,000 jobs were created at these same Michigan companies and over 6,000 in the last 15 years.

\* Source: MVCA 2010 Annual Report; updated figures will be available April 2015

## WHAT IS THE MVCA?

The Michigan Venture Capital Association (MVCA) is a statewide association that facilitates communication, builds relationships, promotes advocacy and sponsors programs that support the interests of its members.

# 91

Investment Professionals

# 33

Venture Funds

# 9

Angel Groups

# 2

Venture Funds

# 2

Fund of Funds

**Marquette**  
2 companies  
200 jobs created

**Leelenau**  
1 company  
5 jobs created

**Grand Traverse**  
1 company  
10 jobs created

**Midland**  
2 companies  
5 jobs created

**Kent**  
7 companies  
401 jobs created

**Genesee**  
2 companies  
9 jobs created

**Ottawa**  
3 companies  
6 jobs created

**Ionia**  
1 company  
10 jobs created

**Oakland**  
18 companies  
160 jobs created

**Kalamazoo**  
18 companies  
91 jobs created

**Ingham**  
10 companies  
105 jobs created

**Van Buren**  
1 company  
25 jobs created

**Jackson**  
1 company  
9 jobs created

**Washtenaw**  
41 companies  
624 jobs created

**Wayne**  
10 companies  
117 jobs created

**Lenawee**  
1 company  
18 jobs created

**Monroe**  
1 company  
60 jobs created

\* Source: MVCA 2010 Annual Report;  
updated figures will be available April 2015

## VC Investment Leads to Great Jobs

- 1 out of every 10 jobs in the U.S. was created by a venture-backed company.
- Every \$38,000 of VC investment creates 1 job
- For every \$1 of VC invested, \$6 of revenues is created
- VC creates 50% higher paying jobs than the median salary

## VC Investment Diversifies Michigan's Economy

**40%** Information  
Technology  
**37%** Life Science  
**16%** Advanced Materials  
& Manufacturing,  
Alternative Energy

**7%** Consumer Products  
and Other

## Why Venture Capital is Growing in Michigan?

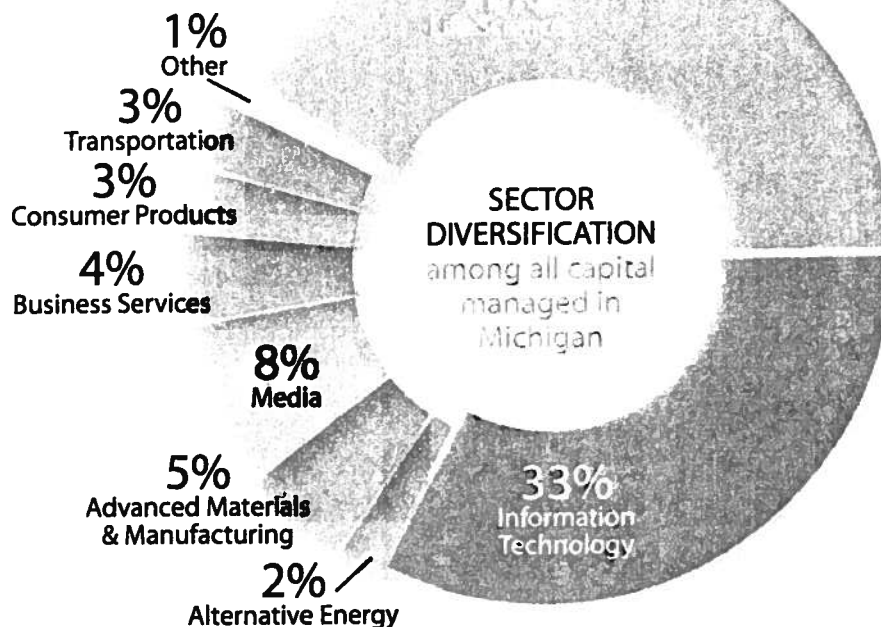
- State of Michigan has invested in VC growth
- Steady growth in capital to invest in start ups
- Growing number of venture firms to partner with

**+84%**

In the last 5 years, the number of venture capital investment professionals increased by 84% in Michigan, compared to a 13% decrease in investment professionals nationally.

**+45%**

In 2013-14, Michigan-based venture capital firms had \$1.6 billion dollars in capital under management, an increase of 45% in the last 5 years.



## KEY FACTS

**104** Venture-Backed Companies active in Michigan in 2013-14

**\$4.0B** Total Capital under Management - \$1.6B Total Capital under Management for firms headquartered in Michigan

**40** companies in Michigan received more than \$120 million in venture capital funding in 2013-14

**116** Angel or pre-seed funded companies active in Michigan in 2013-14

**36** companies in Michigan received more than \$9.9 million in angel capital funding in 2013-14

## Future Need for Venture Capital

Michigan-based portfolio companies will require \$260 million in follow on financing in the next few years, which is more than double what is currently held on reserve for these investments.



# VENTURE CAPITAL



## Venture Investors, LLC

201 South Main St., Suite 900  
Ann Arbor, MI 48104

Jim Adox



VENTUREINVESTORS,LLC



### Key Staff:

Jim Adox - Managing Director  
John Neis - Executive Managing Director  
Loren Peterson - CFO

### Full Time Professionals: 6

### Assets Under Management:

\$201,000,000

### Managed Funds: 6

### Investment Strategy:

Making seed and early stage venture capital investments in high potential healthcare and technology companies. We specialize in university spinouts from Midwest universities, with a focus on the Universities of Michigan and Wisconsin, where we have our two offices. Our geographic focus is companies in the Midwest, however, we invest nationally with trusted co-investors and entrepreneurs.

### Stages of Investment:



### Industry Sectors for Investment:



### Life Science Investments:



### Information Technology Investments:



### Sources of Capital:



### Amount Raised/Targeted:

1/1/2016-6/30/2016	\$150,000,000
Total	\$150,000,000

### Active Portfolio Companies:

Alfalign, Inc.	Adv. Materials & Mfg	Madison, WI
Cellation, Inc.	Life Sciences	Eden Prairie, MN
Chromatin Inc.	Life Sciences	Chicago, IL
Deltanoid Pharmaceuticals	Life Sciences	Madison, WI
Virent, Inc.	Adv. Materials & Mfg	Madison, WI
Aerpio Therapeutics, Inc.	Life Sciences	Cincinnati, OH
Akebia Therapeutics, Inc.	Life Sciences	Boston, MA
Cellectar Biosciences Inc.	Life Sciences	Madison, WI
Euthymics Bioscience, Inc.	Life Sciences	Cambridge, MA
Histosonics, Inc.	Life Sciences	Ann Arbor, MI
NanoBio Corporation	Life Sciences	Ann Arbor, MI
Neurovance, Inc.	Life Sciences	Cambridge, MA
NeuWave Medical, Inc.	Life Sciences	Madison, WI
ProCetus BioPharm, Inc.	Life Sciences	Madison, WI
Silatronics, Inc.	Adv. Materials & Mfg	Madison, WI
Tissue Regeneration Systems, Inc.	Life Sciences	Plymouth, MI
Great Lakes Pharmaceuticals	Life Sciences	Broomfield, CO
Juventus Therapeutics, Inc.	Life Sciences	Cleveland, OH
Madison Vaccines, Inc.	Life Sciences	Madison, WI
Netsocket, Inc.	IT	Plano, TX
NeuMoDx, Inc.	Life Sciences	Ann Arbor, MI
ReShape Medical, Inc.	Life Sciences	San Clemente, CA
Thalchemy Corp.	IT	Madison, WI
UpTo, Inc.	IT	Detroit, MI

### Exits Across All Funds:

ZyStor Therapeutics, Inc.	Life Sciences	Milwaukee, WI
LenSx, Inc.	Life Sciences	Aliso Viejo, CA
Inviragen, Inc.	Life Sciences	Ft. Collins, CO
Nerites, Inc.	Life Sciences	Madison, WI
Pattern Insight, Inc.	IT	San Jose, CA
Gala Design, Inc.	Life Sciences	Middleton, WI
Third Wave Technologies, Inc.	Life Sciences	Madison, WI
TomoTherapy, Inc.	Life Sciences	Madison, WI
NimbleGen Systems, Inc.	Life Sciences	Madison, WI
IntraLase Corporation	Life Sciences	Irvine, CA
Silicon Logic Engineering	IT	Eau Claire, WI
Guild LLC	IT	Madison, WI
GD XI, Inc.	Life Sciences	Milwaukee, WI
Extrel Corporation	Life Sciences	Pittsburgh, PA
Promega Corporation	Life Sciences	Madison, WI
Office Solutions, Inc.	IT	Madison, WI
Shade Allied, Inc.	Manufacturing	Green Bay, WI
NorthWord Press, Inc.	Publishing	Minocqua, WI
Gareth Stevens, Inc.	Publishing	Milwaukee, WI
Akebia, Inc.	Life Sciences	Cincinnati, Ohio

### Portfolio Highlights:

- 1 Akebia Therapeutics successfully completed initial public offering in March 2014.
- 2 BioMarin initiated Phase 3 clinical trial using ZyStor drug, triggering \$13 million milestone payment to former ZyStor shareholders in June 2014.
- 3 Tissue Regeneration Systems (Plymouth, MI) signed collaboration agreement with Johnson & Johnson to develop resorbable implants for large bone defects using TRS's 3-D printing technologies in June 2014.





## MISSION

HistoSonics' mission is to be the technology and market leader in non-invasive surgery. HistoSonics histotripsy platform technology will replace traditional surgical and minimally invasive modalities with non-invasive histotripsy procedures that will reduce patient trauma and healthcare costs significantly.

The first histotripsy clinical application will be an office/clinic based system for non-invasive image guided benign prostatic hyperplasia (BPH) treatment.

## FINANCING STRATEGY

### SERIES A

The Company secured \$14 million in Series A preferred financing (first round, December 2009) from a strong investment syndicate that includes Venture Investors, Hatteras Venture Partners, Fletcher Spaght Ventures, Early Stage Partners and T-Gap Ventures. Use of funds: product development, pre-clinical and clinical studies for the first application: non-invasive BPH treatment.

### SERIES B-1

We are seeking \$6-8 million in Series B-1 funding to support implementation of device modifications and clinical studies to ready the Company for its pivotal trial.

### SERIES B-2

A \$12 million Series B-2 financing is planned for early 2016. Funds will support the pivotal clinical trials, PMA submission and OUS market launch.

## MANAGEMENT AND ADVISORS

**Tom Davison**, Ph.D. Chairman, former CEO Sontra, Endius (Zimmer) & UltraCision (Ethicon-J&J)

**Christine Gibbons**, President & CEO, former CFO/COO Sensicore (GE), Venture Investors' EIR, Ardesta, Seafloater Ventures

**Jim Bertolina**, Ph.D. VP R&D & CTO, former VP R&D Xoran & Technical Director Stryker Liebingier

**Charles A. Cain**, Ph.D. Co-founder, Chairman SAB

**William Roberts**, MD. Co-founder, Chairman CAB

## BOARD OF DIRECTORS

Tom Davison

Christine Gibbons, President & CEO

Jim Adox, Venture Investors

Robert Morff, Ph.D. Hatteras Ventures Partners

Renard Charity, Fletcher Spaght Ventures

Andrew von Eschenbach, MD, former FDA Commissioner, NCI Director, urologist

## TECHNOLOGY DESCRIPTION

Histotripsy, developed at the University of Michigan (U of M), is a non-invasive soft tissue ablation modality that mechanically homogenizes target tissue resulting in complete cellular destruction. As a mechanism that is non-thermal, histotripsy ablates tissue with no thermal injury. The liquefied tissue is absorbed or voided without remnants or scarring. Histotripsy is characterized by the ideal attributes of a surgical ablation modality:

- **Non-invasive:** Histotripsy has the potential to replace open and Minimally Invasive Surgical (MIS) procedures.
- **Precise:** Histotripsy generates precisely focused acoustic pulses that homogenize tissue while keeping temperatures below the thermal injury threshold. Histotripsy can be controlled to exact treatment margins. Consequently, histotripsy can more safely and precisely ablate tumors that are adjacent to vital structures such as vessels and nerves.
- **Image Guided Control:** Histotripsy is integrated with ultrasound imaging to facilitate pre-operative planning, real-time monitoring and treatment verification.
- **Little Scarring or Remnant:** Ablated tissue is homogenized into a fluid, with no cellular content, that is rapidly voided or absorbed leaving little scarring or remnant.
- **Versatile technology platform:** U of M scientists verified potential applications in pre-clinical studies including tumor ablation, fetal heart surgery, thrombolysis, lithotripsy and others.

## MARKET POTENTIAL – BPH TREATMENT & BEYOND

*Benign Prostatic Hyperplasia (BPH), our first clinical application, is a significant medical problem.*

- 50% of men over 50 and 80% of men over 80 suffer from urinary difficulties due to BPH.
- Over 2 million in the US; at least 4 million worldwide seek treatment annually.
- Current treatments
  - Medication
  - MIS procedures; TUMT & TUNA
  - Surgical; TURP, PVP laser
- BPH – 375K interventional procedures in the US. Worldwide potential market over \$500 million.
- Pre-clinical feasibility has been demonstrated for new applications including tumor ablation, thrombolysis and lithotripsy.

## INTELLECTUAL PROPERTY

HistoSonics secured an exclusive worldwide license to the U of M's histotripsy patent portfolio. Today, HistoSonics' IP portfolio includes four issued patents, 20 U.S. patent applications (4 of which national phase filings have been initiated) and numerous invention disclosures.

**MARQUETTE**  
Pioneer Surgical Technology  
VIO

# Venture Capital in Michigan by Location

**LELAND**  
Michelle's Miracle, Inc.

**HILLMAN**  
Mrs. Glee's  
Gluten Free Foods, LLC

**WEST MICHIGAN**  
Ablative Solutions  
Axonia Medical  
Lynx  
MedElite  
Metabolic Solutions Development  
Micro Machine Company  
Monteris Medical  
Mophie  
NephRX  
Performance Fabrics  
ProNai  
RealBio Technology  
Ranir  
Tolera Therapeutics  
Transcorp  
Varsity News Network  
Vestaron  
Xanitos  
Zipments

**TRAVERSE CITY**  
Silikids  
Salamander

**GRAWN**  
Altus Brands, LLC

**MIDLAND**  
Advanced Battery Concepts  
Fulcrum Composites, Inc.  
Midland Solar Applications, LLC  
ePay Select, Inc.

**CLARE**  
Advanced Battery Concepts

**GRAND RAPIDS**  
Plumstone, Inc.  
Blue Medora, LLC  
Mock Draft Central  
InforMed  
Syzygy Biotech  
Tetra Discovery Partners LLC

**MAYVILLE**  
Grab-A-Cane

**SARANAC**  
Conceivex, Inc.

**LANSING**  
Biophotonic Solutions  
XG Sciences  
AFID Therapeutics, Inc.

**PORT HURON**  
ParkingCarma, Inc.

**SPRING LAKE**  
American Glass  
Mosaic

**FLINT**  
Global Energy  
Innovations, Inc.

**BYRON CENTER**  
Transcorp, Inc.

**ZEELAND**  
Downstream, LLC

**EAST LANSING**  
Grand River Aseptic Manufacturing  
Inpire Technologies, Inc.  
Inventure Enterprises  
Supported Intelligence, LLC  
Gema Diagnostics  
Innovative Surgical Solutions

**HOLLAND**  
XTRAPICKUP CORP.  
CREATIVE BYLINE

**JACKSON**  
Eagle Rotary  
IDV Solutions  
NanoRETE

**KALAMAZOO**  
Ablative Solutions  
Auros, Inc.  
Axonia Medical, Inc.  
Micro Machine Company  
RealBio Technology, Inc.  
Vestaron

**YPSILANTI**  
NEW EAGLE  
PRODUCTS, INC.

**DETROIT  
and the METRO AREA**

**DEERFIELD**  
NRG Dynamix

## MAP KEY

Venture-Backed  
Companies

Angel-Backed  
Companies

Both

## ANN ARBOR AREA

3D Biomatrix, Accio Energy, Akasha  
Crystals, AlertWatch, Inc., Amplifinity, Arbor  
Photonics, Arbor Photonics, Arborlight, LLC,  
ArborMatrix, ArborWind, Atterocor, Avegant Corp.,  
Bandals, LLC, Biorectix, LLC, Cerenis Therapeutics, Cielo  
MedSolutions, Covarian, Inc., Current Motor Company, LLC,  
CytoPhex, Deepfield Networks, Discera, EcoDuro, Duo Security,  
Epsilon Imaging, Inc., ERT Systems, LLC, Esperion Therapeutics,  
Farmlogs, Fiber By-products, FlockTAG, LLC, ForeSee Results, FreeStride  
Therapeutics, Inc., Gema Diagnostics, HistoSonics, Hygiene, Inc., InfoReady,  
Corp., InterLink Networks, InTouch, IROA Technologies, LLC, Ix Innovations,  
Jancova, Inc., Kontextual, Inc., Larky, Local Orbit, Lycera, MaxFunds.com,  
Molecular Imaging Research, MyBuys, NanoBio, Nanocerox, Nematron,  
NextGen Metabolomics, Nymirum, OcuSciences, OptoAtmospherics,  
OtoMedicine, Patient Provider Communications, Inc., Phrixus  
Pharmaceuticals, Inc., Pinocchio, Inc., Pixel Velocity, Inc., Portal  
Architects, Quantum Learning Technologies, ReCellular, RetroSense  
Therapeutics, Root3, Rubicon Genomics, Sakti3, Seelio,  
SensiGen, SkySpecs, Solidica, STKR.it, Nymirum, Swift  
BioSciences, Reveal Design Automation, Tangent  
Medical, Inc., Tissue Regeneration Systems, Tolera  
Therapeutics, Inc., Translume, White Pine  
Systems, LLC, XanEdu



**MVCA**

MICHIGAN VENTURE CAPITAL ASSOCIATION

365 Retail Markets, Algal Scientific  
Corporation, Arbor Plastics Technologies,  
Are You a Human, AutoBike, Inc., BEET, LLC,  
BioSavita, Inc., Blaze Medical Devices, Boost Up,  
BoroPharm, 3iS, Inc., Chalkfly, Clean Emission Fluids, Inc.,  
CMS Technologies, Coliant Corporation, Critical Signal  
Technologies, Danotek Motion Technologies, Delphinus Medical  
Technologies, DeNovo Sciences, Inc., DetroitLabs, EcoMotors  
International, Emiliem, Inc., Energy, Inc., Envy Modular Wall  
Systems Inc., Estrakon, Inc., Fidelis SeniorCare, First Sense Medical,  
Fluid, Freeosk, Fusion Coolant Systems, Inc., Ginkgotree, gloStream,  
Grand Circus, GreenLancer, GuidePoint Systems, Gumshoe, Hired  
My Way, iBiquity Digital, iRule, Jodi, Inc., Law Enforcement  
Intelligent Devices, Level Eleven, Livio Radio, Memloom, Inc.,  
MIST Innovations, Mitostem, Motion Technologies, Inc.,  
NextCAT, Inc., Oxus America, Plex Systems, ProNai  
Therapeutics, Quikky, Relume Technologies, Saleztrack,  
LLC, SherTrack, Shopwithit, Spider9, Inc., Sunlogics,  
TM3 Systems, Inc., Unitask, Software, UpTo,  
Ventech, LLC, Workforce Software